Remarks

The Office Action mailed September 21, 2004, has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-20 are now pending in this application. Claims 1-20 are rejected. Claims 2 is objected to. Claims 1, 2, 3, 7, 9, and 14 have been amended. No new matter has been added.

In accordance with 37 C.F.R. 1.136(a), a two-month extension of time is submitted herewith to extend the due date of the response to the Office Action dated September 21, 2004 for the above-identified patent application from December 21, 2004 through and including February 22, 2005. February 21, 2005 was a federal holiday. In accordance with 37 C.F.R. 1.17(a)(2), authorization to charge a deposit account in the amount of $450.00 to cover this extension of time request also is submitted herewith.

The objection to the drawings is respectfully traversed. Applicants submit a substitute set of formal drawings to improve legibility of the text in the figures. No new matter has been added. Accordingly, Applicants respectfully request that the objection to the drawings be withdrawn.

The objection to Claim 2 is respectfully traversed. Applicants have amended Claim 2. Accordingly, Applicants respectfully request that the objection to Claim 2 be withdrawn.

The rejection of Claims 7 and 14-20 under 35 U.S.C. § 102(b) as being anticipated by Dobbins et al. (U.S. Patent No. 5,790,546) is respectfully traversed.

Dobbins et al. describe a chassis (30) that is a mechanical enclosure (31), which is used to house a plurality of networking modules (32), which may include repeater modules, bridge modules, router modules, terminal servers, file servers, etc. (column 13, lines 35-40). One of the modules embodies a secure fast packet switch (SPSF) linked to the module's host processor (column 13, lines 55-56). The chassis is schematically shown in segments consisting of CPU, router, switching (column 14,

lines 18-20). The chassis architecture may be implemented in C++ object oriented programming (OOP) software (column 14, lines 20-22).

Claim 7 recites a network system comprising "a plurality of communications devices configured to communicate with each other; a wire network configured to interconnect said communications devices and allow a plurality of communication transmissions between said communication devices; a network connectivity device connected to said wire network, said connectivity device configured to: amplify communication transmissions such that the distance between said communications device is extended; and route communication transmissions through said wire network; and a central processing unit located within said network connectivity device and configured to communicate with a network hub device located within said network connectivity device and a network switch device located within said network connectivity device, wherein said network hub device configured to interconnect said communication devices by bringing segments of said wire network together, and said network switch device configured to reduce communication collisions by providing communication transmissions from said communications devices with independent paths through said wire network."

Dobbins et al. do not describe or suggest a network system as recited in Claim 7. Specifically, Dobbins et al. do not describe or suggest a central processing unit located within the network connectivity device and configured to communicate with a network hub device located within the network connectivity device and a network switch device located within the network connectivity device, where the network hub device configured to interconnect the communication devices by bringing segments of the wire network together, and the network switch device configured to reduce communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network. Rather, Dobbins et al. describe a chassis that is used to house a plurality of networking modules, which may include repeater modules, bridge modules, router modules, terminal servers, file servers. Dobbins et al. further describe that one of the modules has a host processor linked to a secure fast packet switch. Accordingly, Dobbins et al. do not describe or suggest a central processing unit located within the network connectivity device and configured to communicate with a network hub device

located within the network connectivity device and a network switch device located within the connectivity device, where the network hub device and the network switch device are configured to perform the corresponding functions recited in Claim 7. For the reasons set forth above, Claim 7 is submitted to be patentable over Dobbins et al.

Claim 14 recites a network connectivity device comprising a central processing unit connected to a electronic storage device, a hub module, a switch module, a repeater module and a router module, the connectivity device connected to a wire network interconnecting a plurality of communication devices, the connectivity device configured to "utilize said repeater module to amplify communication transmissions such that the distance between the communications devices is extended; and utilize said router module to route communication transmissions through the wire network, wherein said connectivity device includes a central processing unit configured to communicate with said hub module located within said connectivity device and said switch module located within said connectivity device, said hub module configured to bring segments of the wire network together, and said switch module configured to reduce communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network."

Dobbins et al. do not describe or suggest a network connectivity device as recited in Claim 14. Specifically, Dobbins et al. do not describe or suggest the connectivity device includes a central processing unit configured to communicate with the hub module located within the connectivity device and the switch module located within the connectivity device, the hub module configured to bring segments of the wire network together, and the switch module configured to reduce communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network. Rather, Dobbins et al. describe a chassis that is used to house a plurality of networking modules, which may include repeater modules, bridge modules, router modules, terminal servers, file servers. Dobbins et al. further describe that one of the modules has a host processor linked to a secure fast packet switch. Accordingly, Dobbins et al. do not describe or suggest a central processing unit configured to communicate with the hub module located within the connectivity device and the switch module located

within the connectivity device, the hub module and the switch module configured to perform the corresponding functions recited in Claim 14. For the reasons set forth above, Claim 14 is submitted to be patentable over Dobbins et al.

Claims 15-20 depend from independent Claim 14. When the recitations of Claims 15-20 are considered in combination with the recitations of Claim 14, Applicants submit that dependent Claims 15-20 likewise are patentable over Dobbins et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 7 and 14-20 be withdrawn.

The rejection of Claims 1-13 under 35 U.S.C. § 103(a) as being unpatentable over Subramaniam et al. (U.S. Patent No. 6,070,187) is respectfully traversed.

Subramaniam et al. describe network nodes coupled together into LAN segments via hubs (column 2, lines 59-60). Switches and bridges are used to interconnect local or remote LAN segments (column 3, lines 7-8).

Claim 1 recites a method for forming a network including a plurality of communication devices, a wire network for allowing a plurality of communication transmissions between the communications devices, and at least one connectivity device connected to the wire network, the method comprising the steps of "utilizing the connectivity device to regenerate a communication signal such that the distance between the communications device is extended; utilizing the connectivity device to route communication transmissions by the communications devices through the wire network; and communicating, by a central processing unit located within the connectivity device, with a network hub device located within the connectivity device and a network switch device located within the connectivity device, wherein the network hub device interconnects the communication devices by bringing segments of the wire network together, and the network switch device reduces communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network."

Subramaniam et al. does not describe or suggest a method for forming a network as recited in Claim 1. Specifically, Subramaniam et al. does not describe or

suggest communicating, by a central processing unit located within the connectivity device, with a network hub device located within the connectivity device and a network switch device located within the connectivity device, where the network hub device interconnects the communication devices by bringing segments of the wire network together, and the network switch device reduces communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network. Rather, Subramaniam et al. describe network nodes coupled together into LAN segments via hubs. Subramaniam et al. further describe that switches and bridges are used to interconnect local or remote LAN segments. Accordingly, Subramaniam et al. does not describe or suggest communicating, by a central processing unit located within the connectivity device, with a network hub device located within the connectivity device and a network switch device located within the connectivity device, where the network hub device and the network switch device perform the corresponding functions recited in Claim 1. Rather, Subramaniam et al. describe network nodes coupled together into LAN segments via hubs. Subramaniam et al. further describe that switches and bridges are used to interconnect local or remote LAN segments. For the reasons set forth above, Claim 1 is submitted to be patentable over Subramaniam et al.

Claim 2-6 depend from independent Claim 1. When the recitations of Claims 2-6 are considered in combination with the recitations of Claim 1, Applicants submit that Claims 2-6 likewise are patentable over Subramaniam et al.

Claim 7 recites a network system comprising "a plurality of communications devices configured to communicate with each other; a wire network configured to interconnect said communications devices and allow a plurality of communication transmissions between said communication devices; a network connectivity device connected to said wire network, said connectivity device configured to: amplify communication transmissions such that the distance between said communications device is extended; and route communication transmissions through said wire network; and a central processing unit located within said network connectivity device and configured to communicate with a network hub device located within said network connectivity device and a network switch device located within said network connectivity device, wherein said network hub device configured to interconnect said

communication devices by bringing segments of said wire network together, and said network switch device configured to reduce communication collisions by providing communication transmissions from said communications devices with independent paths through said wire network."

Subramaniam et al. does not describe or suggest a network system as recited in Claim 7. Specifically, Subramaniam et al. does not describe or suggest a central processing unit located within the network connectivity device and configured to communicate with a network hub device located within the network connectivity device and a network switch device located within the network connectivity device, where the network hub device configured to interconnect the communication devices by bringing segments of the wire network together, and the network switch device configured to reduce communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network. Rather, Subramaniam et al. describe network nodes coupled together into LAN segments via hubs. Subramaniam et al. further describe that switches and bridges are used to interconnect local or remote LAN segments. Accordingly, Subramaniam et al. does not describe or suggest a central processing unit located within the network connectivity device and configured to communicate with a network hub device located within the network connectivity device and a network switch device located within the network connectivity device, where the network hub device and the network switch device are configured to perform the corresponding functions recited in Claim 7. For the reasons set forth above, Claim 7 is submitted to be patentable over Subramaniam et al.

Claim 8-13 depend from independent Claim 7. When the recitations of Claims 8-13 are considered in combination with the recitations of Claim 7, Applicants submit that Claims 8-13 likewise are patentable over Subramaniam et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1-13 be withdrawn.

The rejection of Claims 14-20 under 35 U.S.C. § 103(a) as being unpatentable over Subramaniam et al. in view of Picazo Jr. et al. (U.S. Patent No. 5,432,907) is respectfully traversed.

Subramaniam et al. is described above. Picazo Jr. et al. describe a hub or repeater circuit, which is initialized and managed by a microprocessor, is integrated with a bridge or router which is integrated into the same system with the hub or repeater so that much of the circuitry that supports the hub can be shared by the bridge (column 4, line 64 – column 5, line 1). The bridge process can be replaced by a router process (column 5, lines 26-27).

Claim 14 recites a network connectivity device comprising a central processing unit connected to a electronic storage device, a hub module, a switch module, a repeater module and a router module, the connectivity device connected to a wire network interconnecting a plurality of communication devices, the connectivity device configured to "utilize said repeater module to amplify communication transmissions such that the distance between the communications devices is extended; and utilize said router module to route communication transmissions through the wire network, wherein said connectivity device includes a central processing unit configured to communicate with said hub module located within said connectivity device and said switch module located within said connectivity device, said hub module configured to bring segments of the wire network together, and said switch module configured to reduce communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network."

Neither Subramaniam et al. nor Picazo Jr. et al., considered alone or in combination, describe or suggest a network connectivity device as recited in Claim 14. Specifically, neither Subramaniam et al. nor Picazo Jr. et al., considered alone or in combination, describe or suggest the connectivity device includes a central processing unit configured to communicate with the hub module located within the connectivity device and the switch module located within the connectivity device, the hub module configured to bring segments of the wire network together, and the switch module configured to reduce communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network. Rather, Subramaniam et al. describe network nodes coupled together into LAN segments via hubs. Subramaniam et al. further describe that switches and bridges are used to interconnect local or remote LAN segments. Picazo Jr. et al.

describe a hub or repeater circuit, which is initialized and managed by a microprocessor, and is integrated with a bridge or router. The bridge process can be replaced by a router process. Accordingly, neither Subramaniam et al. nor Picazo Jr. et al., considered alone or in combination, describe or suggest a central processing unit configured to communicate with the hub module located within the connectivity device and the switch module located within the connectivity device, the hub module and the switch module configured to perform the corresponding functions recited in Claim 14. For the reasons set forth above, Claim 14 is submitted to be patentable over Subramaniam et al. in view of Picazo Jr. et al.

Claims 15-20 depend from independent Claim 14. When the recitations of Claims 15-20 are considered in combination with the recitations of Claim 14, Applicants submit that dependent Claims 15-20 likewise are patentable over Subramaniam et al. in view of Picazo Jr. et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 15-20 be withdrawn.

The rejection of Claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Subramaniam et al. in view of Crayford (U.S. Patent No. 5,432,775) is respectfully traversed.

Subramaniam et al. is described above. Crayford describes a communications network (100') that utilizes hub/switch technology (column 9, lines 10-12). The network includes a switched hub (150) (column 9, lines 12-15). The switched hub includes a central processing unit (CPU) (152), a read only memory (ROM) 154, and a random access memory (RAM) (156), which are all coupled to an internal switch bus (158) (column 9, lines 15-18). Also coupled to the internal bus are a plurality of media access controller (MAC) systems (160) (column 9, lines 18-20).

Claim 14 recites a network connectivity device comprising a central processing unit connected to a electronic storage device, a hub module, a switch module, a repeater module and a router module, the connectivity device connected to a wire network interconnecting a plurality of communication devices, the connectivity device configured to "utilize said repeater module to amplify communication

transmissions such that the distance between the communications devices is extended; and utilize said router module to route communication transmissions through the wire network, wherein said connectivity device includes a central processing unit configured to communicate with said hub module located within said connectivity device and said switch module located within said connectivity device, said hub module configured to bring segments of the wire network together, and said switch module configured to reduce communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network."

Neither Subramaniam et al. nor Crayford, considered alone or in combination, describe or suggest a network connectivity device as recited in Claim 14. Specifically, neither Subramaniam et al. nor Crayford, considered alone or in combination, describe or suggest the connectivity device includes a central processing unit configured to communicate with the hub module located within the connectivity device and the switch module located within the connectivity device, the hub module configured to bring segments of the wire network together, and the switch module configured to reduce communication collisions by providing communication transmissions from the communications devices with independent paths through the wire network. Rather, Subramaniam et al. describe network nodes coupled together into LAN segments via hubs. Subramaniam et al. further describe that switches and bridges are used to interconnect local or remote LAN segments. Crayford describe a switched hub coupled to a plurality of media access controller (MAC) systems. Accordingly, neither Subramaniam et al. nor Crayford, considered alone or in combination, describe or suggest a central processing unit configured to communicate with the hub module located within the connectivity device and the switch module located within the connectivity device, the hub module and the switch module configured to perform the corresponding functions recited in Claim 14. For the reasons set forth above, Claim 14 is submitted to be patentable over Subramaniam et al. in view of Crayford

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claim 14 be withdrawn.

Moreover, Applicants respectfully submit that the Section 103 rejections of Claims 1-20 are not proper rejections. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. None of Subramaniam et al., Picazo Jr. et al., or Crayford, considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Subramaniam et al. with Picazo Jr. et al. or Crayford because there is no motivation to combine the references suggested in the cited art itself.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicants' disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

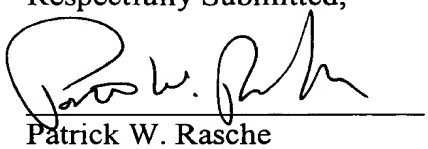
Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejections are based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Subramaniam et al. teach network nodes coupled together into LAN segments via hubs. Subramaniam et al. further teach that switches and bridges are used to interconnect local or remote LAN segments. Picazo Jr. et al. teach a hub or repeater circuit, which is initialized and managed by a microprocessor,

and is integrated with a bridge or router. The bridge process can be replaced by a router process. Crayford teach a switched hub coupled to a plurality of media access controller (MAC) systems. Since there is no teaching nor suggestion in the cited art for the combination, the Section 103 rejections appear to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejections of Claims 1-20 be withdrawn.

For at least the reasons set forth above, Applicants respectfully request that the rejections of Claims 1-20 under 35 U.S.C. 103(a) be withdrawn.

In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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